IN THE DRAWINGS

Applicants submit herewith a replacement sheet for Figure 2 of the application. No new matter has been added.

REMARKS

The Drawings were objected to for including certain reference characters which were not mentioned in the description. Applicants have amended Figure 2 to delete the "Q" and ":" boxes. A replacement sheet for Figure 2 has been included with this paper. Applicants have further amended the specification to include reference to each of reference characters shown in Figure 2. Withdrawal of the objection to the drawings is requested.

The Drawings were further objected to for failure to show every feature of the invention as recited in claims 2-14 and 16-42. Applicants respectfully traverse. The Examiner notes that the labels used in Figure 3 are not consistently matched with the elements recited in claims 2-14 and 16-42. This is not a proper basis for objecting to the drawings, and further ignores the contribution of Figure 2. The requirement is for the drawings to illustrate the features claimed. There is no requirement for exactly the same language to be used in both the drawings and the claims. Applicants respectfully submit that the drawings, for example, Figures 2-4, clearly illustrate the claimed features. In this regard, it should be understood by the Examiner that the claims are directed to concepts which are more concretely illustrated in the drawings (and described in the specification). More than one illustrated feature from a Drawing may relate to, and support, a single claim limitation. Additionally, the illustrations on more than one drawing Figure may relate to, and support, a single claim limitation. The Examiner is invited to further consider the teachings of the drawings, and more specifically the specific illustrated features from the Drawings taken in context with each other and the supporting specification, in comparison to the concepts recited in the claims. In this way, Applicants believe that the drawings, taken in conjunction with the description from the specification, clearly support each

of the recited claim limitations. Applicants respectfully request that the objection to the Drawings under 37 C.F.R 1.83(a) be withdrawn.

The disclosure was objected to because the features recited by claims 2-14 were not seen to be consistent with the description in the specification. Applicants respectfully disagree and point out again that the language in the claims may, in some instances, be more conceptual than the concrete language of the specification. Notwithstanding the foregoing, Applicants have amended the specification in the manner indicated above to both refer to specifics of the Drawings and further use language which is more consistent with that used in the claims. In view of the foregoing, Applicants request that the objection to the disclosure be withdrawn.

Claims 1 and 15 were rejected under 35 U.S.C. 102(b) as being anticipated by Yoo. Applicants respectfully traverse.

In Yoo, a teaching is made for measuring data retention time of a DRAM (col. 3, lines 34-35), and then adjusting the self-refresh time period based on the measured data retention time (col. 3, lines 35-43). It is noted, however, that Yoo specifically teaches that the "self-refresh period is made (i.e., set) using a laser fuse in a wafer state or an electrical fuse once in a package state" (col. 3, lines 43-45). Thus, the self-refresh period is fixed by the utilized fuse structure and based on the data retention time measurement.

Applicants, on the other hand, specifically claim "continuously and dynamically measuring the retention time of all the memory cells of the memory; and continuously and dynamically regulating the refresh period of the memory based on the result of this measurement." Thus, not only is the retention time continuously and dynamically measured, but also the refresh period continuously and dynamically regulated in accordance with the measured

retention times. There is no teaching or suggestion in Yoo for the claimed continuous and dynamic measurement/regulating operations. Rather, once the retention time is measured in Yoo, a laser fuse in a wafer state or an electrical fuse once in a package state is set to fix the self-refresh period for the chip (col. 3, lines 43-45). Such a fixing operation at the wafer or package state for the chip would preclude the claimed operation for "continuously and dynamically regulating the refresh period of the memory based on the result of this measurement."

An advantage of Applicant's operation to continuously and dynamically measure retention time is that the refresh period can continuously and dynamically change and thus account for changes in temperature (see, specification Paragraphs [5], [25], [29], [31], [67], and [84]). Such cannot be achieved with Yoo's process and method where the refresh period is statically set on the chip/package by a fuse in response to a data retention time measurement.

Claim 15 recites "a memory refreshing circuit that operates to continuously and dynamically measure the retention time of all the memory cells of the memory, and to continuously and dynamically regulate the refresh period of the memory based on the result of this measurement." Applicants respectfully submit that claim 15 distinguishes over Yoo for at least the same reasons as claim 1.

Withdrawal of the Section 102 rejection and allowance of claims 1 and 15 is accordingly requested.

In view of the foregoing, Applicants respectfully submit that the application is in condition for favorable action and allowance.

Respectfully submitted,

JENKENS & GILCHRIST,
A Professional Corporation

By: _____
André M. Szuwalski
Registration No. 35,701

1445 Ross Avenue, Suite 3700
Dallas, Texas 75202-2799
Tel: 214/855-4795
Fax: 214/855-4300